"The Plan"

- Requisites for establishing the U.S. as the preferred (acceptable?) host country for a linear collider:
  - Establish credibility of the U.S. as a reliable partner
    - Secure and dependable (U.S.) budgets
    - Minimal Congressional and DOE interference
    - Willingness to adapt to recognized international standards and to waive rules.
    - Non-politicization of the site
  - Develop confidence within the world scientific community that they will be welcome
    - Access to the U.S. (visas)
    - Exceptions on job permits (spouses)

    ⇒Potential show stopper in current climate
  - Establish Fermilab leadership role on linear collider.

"The Plan"

- Requisites for establishing Fermilab as the preferred host lab for a linear collider:
  - Establish Fermilab/Illinois capability to serve as host lab/region for a linear collider, both in reality and in perception.
    - Technical ability
    - Organizational/management capabilities
    - Excellent site
    - Intellectual leadership
    - Enthusiasm for the role
  - Understand the parameters associated with the host lab role.
    - Relationship between Fermilab and the international "entity"
    - What part of the ongoing program are we willing to sacrifice, and on what timescale?
  - Establish support from our neighbors, state and local governments, local universities/laboratories, U.S. community.

"The Plan"
Plan elements

We suggest that a strategic plan for establishing Fermilab as the preferred host lab requires the following elements:

- Commitment and leadership at the highest levels of Fermilab management to establish Fermilab as the preferred host.
- Develop Fermilab capability to provide technical leadership on the LC construction project.
  - Engagement in the critical accelerator technology issues and demonstration project(s). Suggest identifying a limited number (two) of areas in which to concentrate accelerator physics effort with goal of establishing leadership, e.g.
    - Damping ring
    - Main linac

"The Plan"
Plan elements

- Assume leadership and host the technology demonstration project.
  - Complete a design study for warm and cold versions of ETF on the timescale of the technology decision.
  - Understand connection to the Proton Driver following the technology selection.
- Target R&D within a limited number of areas which are deemed critical to detector performance, and in which we have special capabilities. Such R&D should include collaborators from the US and abroad. Examples:
  - Vertexing and Tracking
  - Calorimetry
  - Muons
  - Test beams

"The Plan"
Plan elements

- Identify a preferred Illinois site and develop a site plan.
  - Establish collaborations with local institutions and state/local governments.
  - Retain close collaboration with broader U.S. community on CA sites.
- Establish a realistically achievable timeline for construction and operations (in concert with the USLCSG and ILCSG).
- Strengthen Fermilab presence within the LC collaboration(s)
- Maintain a strong Fermilab presence within the USLCSG and ILCSC (and their successors).

"The Plan"
Plan elements

- Develop an outreach plan addressing the following constituencies
  - Local communities
  - State government
  - The Fermilab staff
  - Local universities and laboratories
  - Could include
    - Follow-up to public opinion survey in ~2005
    - Follow through on community task force
    - Integrate university programs into the LC accelerator R&D program.
      - Strengthen coupling between Fermilab strategic planning and activities of ICAR and NICADD.
      - Connect to other mid-western universities
    - Strengthen ties with ANL in projects of mutual interest.
  - Work within the USLCSG (and ILCSC) on outreach to national (and international) scientific communities.

"The Plan"
Plan elements

- Establish a model for interaction between Fermilab as host lab and the international project consistent with the evolving view of the international community.
  - Define the preferred relationship between Fermilab (as host lab) and the international project organization. Includes:
    - Roles and responsibilities
    - Authorities
    - Scope of work Fermilab would imagine undertaking
  - Determine the correct balance between the ongoing research program and the linear collider facility during both the construction and operations phases.
    - What fraction of Fermilab resources need to be devoted?
    - What would the non-LC research program then look like?

"The Plan"
Resource Requirements

- Current budget is ~$4M
- Needs to rise to ~$20M by the time host lab is selected (2006? 07?)
  - Roughly 80% of this should be going to accelerator and siting studies
- To ~$100M by the time of construction start (assuming Fermilab is host lab)
  - Staff effort should be in proportion
- Somewhat less (2/3 x $100M?) if U.S. is host country, but Fermilab not host.
- Less again (1/3 x $100M?) if U.S. is not host country.

"The Plan"

Prototype Recommendations

Disclaimer: Recommendations not yet endorsed by the full FLRPC.

Assuming Fermilab wishes to vie for the position of linear collider host laboratory we recommend the following steps:

1) Adopt as policy that Fermilab wishes to be host lab to the linear collider.
2) Establish coordination at the Directorate level for formulation of "The Plan" to achieve this.
3) Execute "the plan" with Directorate coordination
   - Address suggested elements listed above (plus those we haven't thought of)
   - Be prepared to devote significantly enhanced resources
     - Rising to ~$20M/year at the time of host lab selection.
     - Rising to ~$100M/year at the time of construction start.
   - Establish the fallback position if LC does not come to Fermilab

Conclusions and (Personal) Opinions

- The opportunity to host a physics frontier facility comes rarely. We cannot “pass”.
- Fermilab has a responsibility both to our staff, and to the national and international communities to establish ourselves as an excellent candidate for the LC host laboratory.
- We should commit our laboratory to a plan that maximizes the likelihood of Fermilab becoming host lab.
- Governance models similar to that described by Kalmus allow us to do this without holding the future of the laboratory hostage to a process (getting to a LC construction start) that may take a long time to culminate or may result in the LC being constructed elsewhere.
- The development of a backup plan should not be interpreted as a lack of commitment.